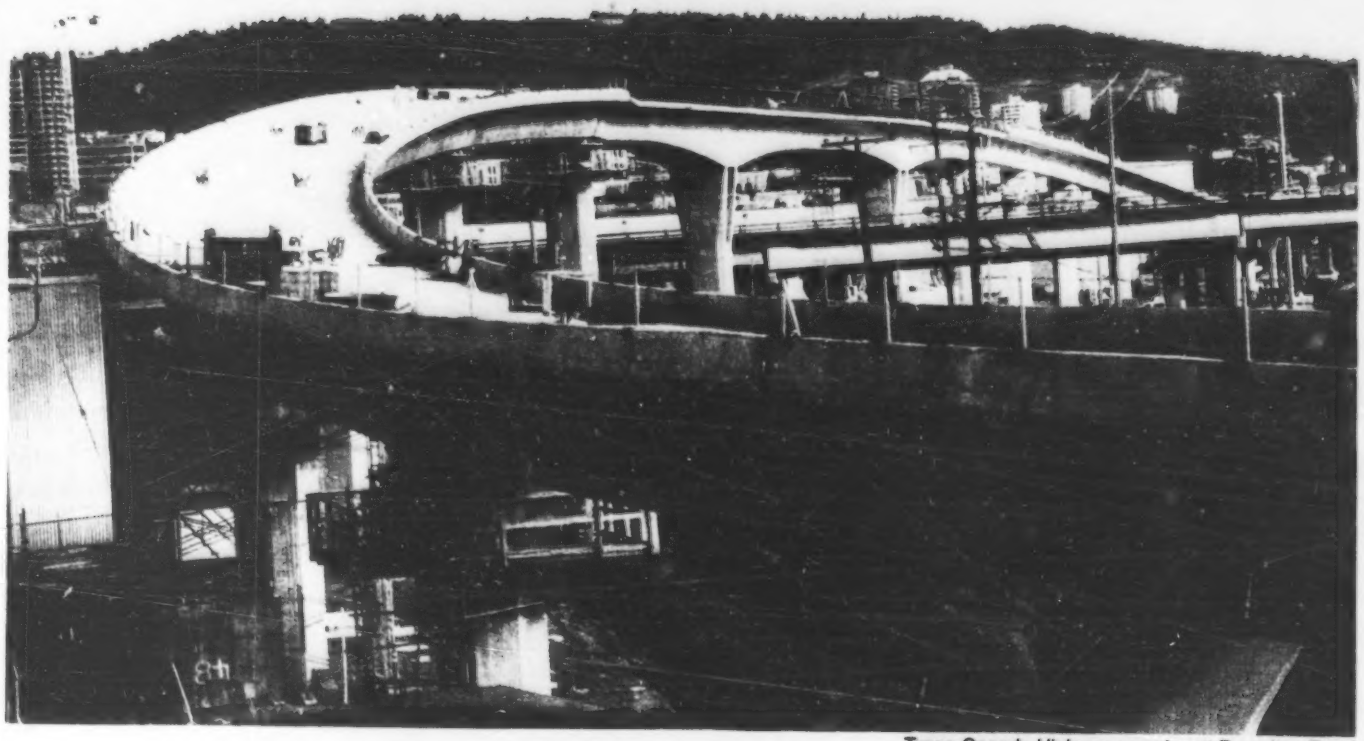
Rapid Transit Project 2000 Ltd.



Trans-Canada Highway crossing at Boundary Road

Performance Plan

Fiscal Years 2001/02 – 2003/04

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MISSION

In 1998, the provincial government created Rapid Transit Project 2000 Ltd. (RTP 2000) to manage rapid transit network expansion in the Lower Mainland. Specifically, RTP 2000's mandate is to:

- plan, design and construct the Millennium SkyTrain line between Columbia Station in New Westminster and Vancouver Community College (VCC) in Vancouver;
- undertake studies to determine the feasibility, acceptability, cost, implementation options and financing strategies for lines including:
  - the Port Moody-Coquitlam Line between Lougheed Town Centre and Coquitlam Centre via Port Moody;
  - the Vancouver west extension from Vancouver Community College along the Broadway corridor to a terminus between Cambie and Arbutus

A cost-sharing agreement between the Province and TransLink outlines the payment schedule and responsibilities for rapid transit expansion. Under the terms of the agreement, the Province is responsible for SkyTrain construction and TransLink is the regional transportation authority responsible for operating and maintaining the SkyTrain system.

In addition, the agreement stipulates that the Province is responsible for 100 percent of the approved $1.167-billion Millennium Line budget. TransLink will contribute a lump sum payment of $650 million toward rapid transit expansion on completion of the Port Moody-Coquitlam Line. The Province will also pay 67 per cent of the costs for the Vancouver west extension with TransLink responsible for the remaining 33 per cent.

- **Millennium Line**

  The 21-km, $1.167-billion Millennium Line currently under construction will link Vancouver and New Westminster via the Broadway-Lougheed corridor. The Millennium Line will service riders with 12 new stations. In addition, a 13th future station will be built by early 2004. The first phase of the Millennium Line through New Westminster will begin revenue service at the end of 2001. The line is scheduled to be commissioned in three phases:

Phase one:	Through New Westminster to Braid Station	December 2001
Phase two:	To Commercial Station	Summer 2002
Phase three:	To VCC	End 2002

  With the elevated guideway portion of the Millennium Line completed, construction is now focused on electrical and mechanical work, station construction and related municipal service interfaces such as bus loops. In addition, work on the at-grade portion of the guideway through the Grandview Cut in Vancouver continues.

- **Future lines**

A SkyTrain line to serve the Lower Mainland's northeast sector is a long awaited transit improvement. As part of RTP 2000's mandate, planning is underway for the future construction of the line from Lougheed Town Centre to Coquitlam via Port Moody as is planning for the future construction of a SkyTrain line west from Vancouver Community College to serve the central Broadway corridor.

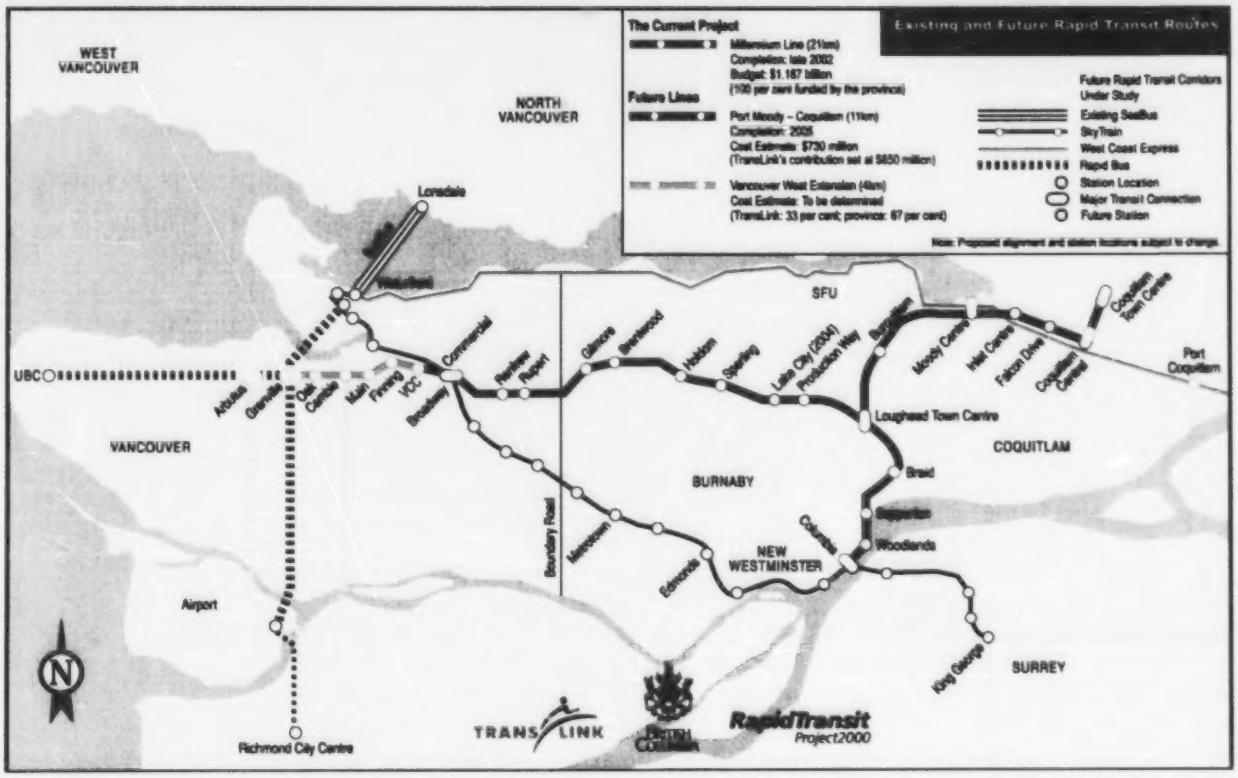

Figure 1 – Construction of the Millennium Line, shown in red, is underway. Planning and preliminary design for the future Port Moody-Coquitlam (shown in green) and Vancouver west (shown in orange) lines is underway.

VISION

Greater Vancouver's population has grown significantly over the past 15 years and is expected to grow to more than two million by 2021. This will mean more vehicles on our roads, more air pollution and more pressure on green space. Expanding Greater Vancouver's rapid transit system is key to the Province's commitment to addressing traffic, air quality and urban sprawl issues, and the Millennium Line is the first of three planned phases of rapid transit expansion. In addition, rapid transit expansion supports the provincial *Growth Strategies Act* — a legislative initiative to contain and reduce urban sprawl.

Because of its strong potential to increase transit ridership and focus urban development, the Greater Vancouver Regional District and the Province have recognized the Broadway-Lougheed-New Westminster-Coquitlam corridor as the priority for rapid transit development. Extensive public consultation also reveals that the public supports this corridor.

Two governing goals will help turn the vision of an expanded rapid transit system in Greater Vancouver into a reality:

- **Meeting customer needs**

  RTP 2000 has taken a consumer-driven approach to planning and designing the expanded rapid transit system. Market research and public consultation reveal commuters want a new SkyTrain system because it is clean, comfortable, fast, reliable and safe. To meet customer needs, much of the new system reflects the input received from the public. By providing customers with a system that meets their needs, more people will be attracted to the SkyTrain system.

- **Realizing economic benefits**

  The provincial government has made a substantial investment in Greater Vancouver's transit system with the Millennium Line. In turn, the benefits the new line brings to the provincial and regional economy are also substantial. Bombardier Transportation, the provider of SkyTrain technology, has built the $18.5-million Centre for Advanced Transit Systems in Burnaby – a key commitment of its memorandum of understanding with the Province.

  A recent economic benefit analysis by Edwin Blewitt and Associates determined that in less than two years of operation in B.C., Bombardier has exceeded its commitment to invest $175 million in the provincial economy by $25 million. The analysis also showed that 75 per cent of the 165 jobs Bombardier committed to creating at its Centre for Advanced Transit Systems will be created in the region.

  With the largest fleet of MK I SkyTrain cars, Vancouver's SkyTrain system has been internationally recognized as one of the most efficiently operated rapid transit systems in the world. Expanding on that success, Bombardier is manufacturing 50 of the 60 new advanced MK II vehicles for the expanded SkyTrain system at its Centre for Advanced Transit Systems, creating direct and indirect jobs for British Columbians.

Bombardier's Centre for Advanced Transit Systems is also serving as a focal point for marketing SkyTrain technology globally to Asia-Pacific markets. This new international centre will have positive investment potential for the local economy and workforce.

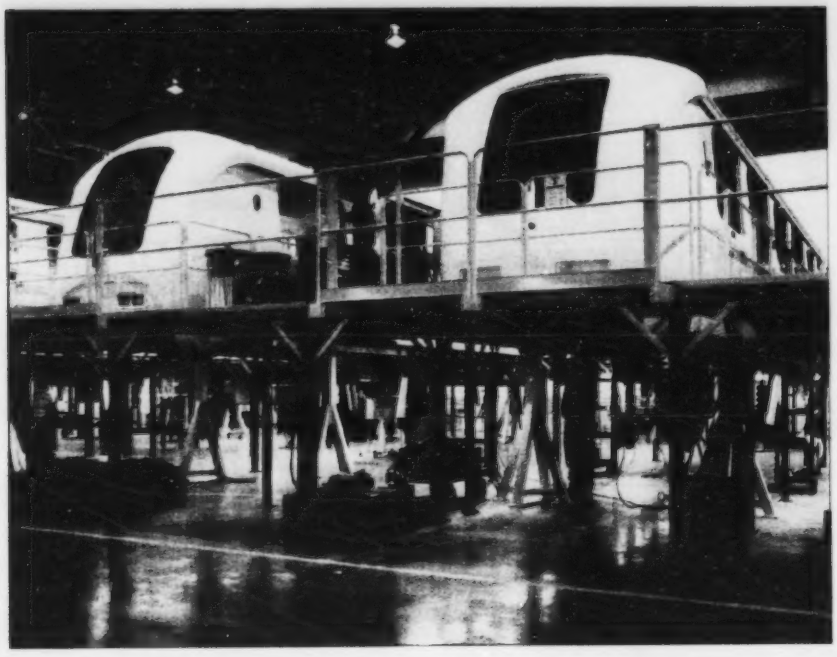

Figure 2 – Bombardier's Centre for Advanced Transit Systems, located in Burnaby, where 50 of the 60 new MK II SkyTrain cars for the expanded SkyTrain system will be built.

PRINCIPLES

As a wholly owned provincial company, RTP 2000 is accountable to British Columbians to ensure the project is completed on schedule and on budget. In carrying out its mandate, RTP 2000 adheres to the following principles and practices:

- **Governance and consultation**

  RTP 2000's board of directors manages the project and reports directly to the provincial minister responsible for transit.

  The board's overall responsibility is to ensure fiscal integrity and timely completion of the Millennium Line, and for planning future lines. In addition, the board ensures that:

  - plans and expenditures reflect shareholder policies in respect to system design, scope, cost and schedule
  - major risks have been identified and appropriate systems implemented to manage them
  - resources are safeguarded and managed cost-effectively
  - RTP 2000 effectively communicates on all aspects of its mandate with its stakeholders

  The board meets monthly to review project progress, critical issues, expenditures and budget.

  RTP 2000's board of directors comprises six members with sound credentials in managing major capital projects. Members are:
  - Robert Lingwood, RTP 2000 board chair – president and CEO of BC Ferries
  - George Chen, chair of RTP 2000's audit committee – chair of BC Transit
  - Joan Harrison – principal of The Osborne Group
  - Blair Redlin – president of the BC Transportation Financing Authority
  - Lecia Stewart – president and project director of RTP 2000
  - Win Stothert – chair of The Stothert Group

- **Budgetary control**

  RTP 2000's plans, policies and procedures for managing the Millennium Line's cost, schedule and budget are detailed in a series of comprehensive manuals and plans. Independent transportation and accounting experts scrutinized these documents, and confirmed that RTP 2000 was well prepared to undertake construction of the Millennium Line.

  Risks and challenges change as the project moves forward. To ensure that management and control strategies remain appropriate and effective through the life of the project, quarterly reviews and annual audits are undertaken.

  Independent experts regularly review project progress against budget and schedule, and identify any required corrective action. In addition, a recent independent provincial review of major capital projects also confirmed RTP 2000 has effective measures in place to monitor project progress and budget.

Regular quarterly reviews include:

- Quarterly financial reviews by accounting firm KPMG. To date, five reviews have taken place. KPMG also prepares RTP 2000's audited annual financial statement.

- Quarterly project management oversight reviews are conducted by transportation engineering firm Gannett Fleming. Gannett Fleming identifies current and potential issues arising through the course of the project that may require preventive or corrective action, recommends any required shifts in project focus and follows up to ensure they are taken in a timely manner. Gannett Fleming has conducted five reviews to date.

In keeping with an open and transparent process, these quarterly reports are publicly distributed and posted on RTP 2000's website.

SkyTrain technology has operated in Greater Vancouver since 1986. Since then, more than 500 million people have used the line. This proven technology contributes to the reliability of the control budget developed for the project. Sound financial and contract management methods maximize value received for dollars spent. In addition, all major construction and supply contracts are awarded on a fixed, lump-sum basis, adding to the reliability of the controlled budget.

RTP 2000 also liaises closely with the Ministry of Finance and Corporate Relations in its management of risks and costs in order to work within approved capital expenditure limits.

- **Customer-focussed design**

As stated earlier, maintaining a customer focus throughout all aspects of system planning and design will help to attract more riders to the system. The Millennium Line, from the new MK II cars to the new stations, has been designed based on customer input. The new cars are wider, more spacious and have numerous other features to ensure a more comfortable ride. The first of the new MK II cars will be serving the existing Expo Line by summer 2001. Each new station has been designed to be a part of the community in which it is located and each reflects input received from local residents in the design process.

- **Safety and security**

Public consultation and market research show that personal safety and security at SkyTrain stations are key concerns, and RTP 2000 has made these issues a priority in developing the new system. The design of the new stations incorporates Crime Prevention Through Environmental Design principles. New features such as glass-walled elevators, see-through stations using glass wherever possible, increased lighting and retail space conform to these principles. In addition, closed circuit TV cameras, provision for a station manager's room and controlled access have been included in station design.

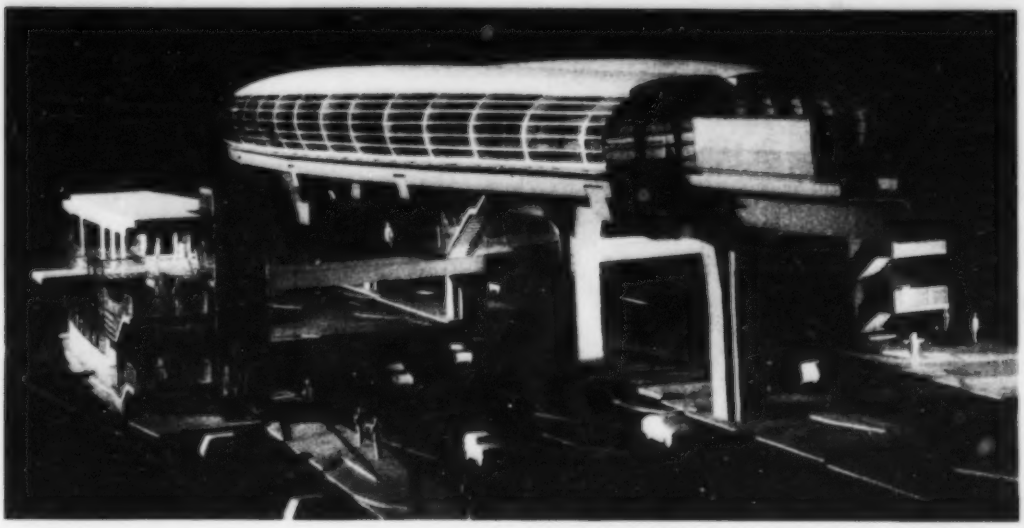

Figure 3 – As shown in this illustration of Brentwood Town Centre Station, glass walls and clear sightlines are two features that will improve safety and security.

- **Environmental sensitivity**

  Environmental protection is also a key priority. Not only is SkyTrain technology known for its fast, reliable and convenient service, its zero-emission technology means a cleaner, better future for the Lower Mainland.

  In addition, the Millennium Line project meets or exceeds all provincial and federal government environmental requirements. Environmental considerations were built into each planning, design and construction step.

  The Millennium Line project underwent strict environmental scrutiny with two levels of environmental review. Construction did not begin until Canadian Environmental Assessment Act approval was received in the fall of 1999. A special environmental commission, appointed by the provincial government, reviewed the planning and design in late 1998 and early 1999.

  In addition, in the limited places where trees, vegetation and wildlife habitat have been disturbed, RTP 2000 has committed to compensating with a one-for-one tree replacement program, both replacing and returning habitat to natural ecosystems. In addition, new greenways are being created along sections of the new line.

Figure 4 – Artist's rendering of what new greenspace could look like, replacing the existing truck route along Grandview Highway North in Vancouver.

- **Partnerships**

  The Millennium Line is being built in the spirit of co-operation and partnership.

  Partnerships with the region and municipalities ensure local communities benefit from the Millennium Line. TransLink and the Province created a $60-million municipal integration fund to fund enhancements outside the project scope, such as bus loops. A new foreshore park is being completed in New Westminster to help integrate the Millennium Line into that community.

  Partnerships with the private sector also benefit British Columbia. The Province's partnership with Bombardier is delivering economic and job creation benefits.

  Retail development as part of the new Commercial Drive Station is part of a redevelopment initiative that involves co-operation between RTP 2000, the City of Vancouver and a private developer.

  Social objectives are being advanced through RTP 2000's employment equity and First Nations programs. Under the First Nations program, the new foreshore park and the Sapperton and Braid electrical substations are being built by a First Nations joint venture.

RTP 2000 has implemented a project labour agreement that offers several cost and risk mitigation benefits to the project including a no strike/no lockout clause and provision of construction labour administration experienced in multi-million-dollar projects.

The project's labour agreement includes provisions to hire local workers for community benefits. As well, its equity program targets hiring underrepresented groups such as First Nations, women, youth and visible minorities. In March 2001, 785 construction workers were on the project, but there has been as many as 1,400 construction workers in a month.

PROJECT GOALS AND PERFORMANCE TARGETS

1. **Design and construct the Millennium Line**

Budget

RTP 2000's main goal is to safely construct the Millennium Line from New Westminster to Vancouver Community College within the total approved project budget of $1.167 billion. Significant progress has been made since construction began in fall 1999. The forecast cost at completion remains within the approved budget. A breakdown of the construction budget is included in Table 2.

Schedule

The first phase of the Millennium Line will begin serving New Westminster to Braid Station by the end of 2001. By the summer of 2002, the line will continue through to Commercial Drive Station in Vancouver and is scheduled to be complete to VCC Station in late 2002.

2. **Maximizing the Millennium Line's customer appeal**

The new system is designed to meet its future customers' needs. SkyTrain passengers will find the system and the stations convenient, comfortable and safe.

3. **Accounting for environmental consideration in all project decisions**

RTP 2000 will avoid, minimize or mitigate environmental impacts.

4. **Meeting and exceeding system performance targets**

RTP 2000 is working to achieve the following performance targets for the Millennium Line:

Passenger capacity

The Millennium Line will have a capacity of 30,000 passengers per peak hour, per direction travelled. SkyTrain is a grade-separated system, meaning it travels along a designated guideway. Service is assured regardless of road conditions. SkyTrain's success Greater Vancouver is due to the fast, reliable and convenient service it provides.

Although Greater Vancouver's SkyTrain system boasts the largest fleet of MK I SkyTrain vehicles, the existing Expo Line has operated at capacity since 1990 due to vehicle and fleet limitations. To increase capacity of that line, which operates from downtown Vancouver to Surrey, 20 new MK II SkyTrain cars have been purchased and will be in operation by fall 2001.

Ridership

As presented in Table 1 below, RTP 2000's goal is to reach ridership targets of 100 million passengers for the entire SkyTrain system by 2006.

Table 1
Annual SkyTrain Ridership Forecasts, 2006

Existing Expo SkyTrain Line	67 - 71 million annual rides
Plus: Millennium Line	29 - 33 million annual rides
Total	96 - 104 million annual rides

Travel time

Attract commuters by providing a fast and frequent service with competitive travel times. The estimated travel time between Columbia Station and Vancouver Community College Station – the length of the 21-km Millennium Line – is about 32 minutes. Depending on the time of day, the same trip would take about 40 minutes by car.

System reliability

Ensure the Millennium Line meets or exceeds the reliability of the existing Expo Line. The reliability target for the new line is to deliver 95 per cent of all scheduled trips within two minutes of the scheduled trip time. Reliability and performance measures are established in Bombardier's contracts.

5. Planning the Port Moody-Coquitlam and Vancouver west SkyTrain lines

RTP 2000 is establishing the scope, estimated cost and implementation plans for constructing rapid transit lines along corridors from Lougheed Town Centre to Coquitlam via Port Moody, and west from Vancouver Community College along the Broadway corridor to a terminus between Cambie and Granville or central Broadway.

The $8-million budget for these studies is included in RTP 2000's total spending authorization, which is displayed in Table 3.

CORPORATE STRATEGIES

RTP 2000 has a number of corporate strategies to help achieve these goals:

- **Rapid Transit Project 2000 program definition**

  Project management and control are specified in two documents. RTP 2000 developed this framework in accordance with Treasury Board requirements.

  The *Program Requirements Definition* defines the nature and timing of project deliverables, and establishes the project scope, resource requirements, constraints, acceptance standards and budget.

  The project's organizational and management approaches are set out in the *Program Management Plan.* It includes management responsibilities, interactions between the project office and consultants and contractors, and the tools and procedures needed to run the program effectively.

  Overall, the functioning of RTP 2000 is guided by 30 manuals and plans. These manuals and plans cover project management, quality, safety, design, contract procedures, construction management, vehicle production, operations and maintenance, communications and project administration. These baseline documents are revised and updated as necessary.

- **Planning and design**

  In February 1999, RTP 2000 finalized the Millennium Line's route and station locations. These decisions were based on a concentrated planning process that entailed extensive stakeholder and public consultation, environmental considerations, ridership analysis and land-use implications.

  RTP 2000 submitted the results of the planning phase to the provincial government for review and approval in April 1999. The submission included analysis of project risks and proposed mitigation strategies. Subsequently, Treasury Board confirmed the overall $1.167-billion project budget and authorized RTP 2000 to proceed with major construction contracts and implement the project.

- **Value engineering**

  Treasury Board requires value engineering to be applied to ensure the project uses the most cost-effective design and construction methods. A panel of international experts carried out an independent and external audit of the design and engineering solutions proposed.

  RTP 2000 completed this comprehensive process in 1999 and has continued to apply value engineering in awarding contracts.

- **Procurement and tendering**

Project expertise from the existing SkyTrain line, together with proven SkyTrain technology, enabled RTP 2000 to comprehensively scope contracts to use a fixed-price contracting strategy.

Bombardier contracts

In 1998, the Province and Bombardier signed a Memorandum of Understanding. According to its terms, RTP 2000, acting as an agent for the Province, and Bombardier entered into negotiations on two separate contracts related to the provision of SkyTrain technology.

Bombardier is the proprietary owner of SkyTrain technology. As such, the first contract negotiated with Bombardier was the vehicle contract. The fixed-price contract provides for a base order of 40 new MK II SkyTrain vehicles – with a total of up to 120 new vehicles. As an option exercised for TransLink, 20 new vehicles were also purchased for TransLink's expansion of the existing Expo Line. RTP 2000 compared cost information for similar vehicles acquired by other transportation authorities to confirm the fairness of the price paid for the new cars.

RTP 2000 also concluded a second fixed-price contract with Bombardier. The electrical and mechanical systems contract includes the automatic train control system, communications systems, trackwork, system engineering and integration. To establish a fair price, RTP 2000, with assistance from PricewaterhouseCoopers, created this contract based on the experience gained from the existing SkyTrain line. In addition, Parsons Transportation reviewed the contract for completeness and appropriate risk transfer to Bombardier.

RTP 2000 has effectively assigned technology risk related to vehicles and the electrical/mechanical systems to Bombardier through performance warranties and has ensured that a competitive price is maintained through these contracts. Together, the two major contracts account for $322.2 million of the total Millennium Line construction budget.

Competitive Bid Contracts

All other work on the project has been awarded on a competitive bid basis.

The major construction contract is for the elevated guideway portion of the Millennium Line. The $209-million, fixed-price design-build contract for about 16 km of the Millennium Line was awarded to SAR Transit in May 1999. Construction of this portion of the line is scheduled to be finished in spring 2001.

Walter/BFC competitively bid and won the $24-million contract to build the New Westminster tunnel portion of the Millennium Line. The contract has been completed on budget and schedule.

Fixed-price conventional design contracts, followed by competitive tenders, are used for construction of all other sections of the guideway. Peter Kiewit Sons was awarded four separate fixed-price contracts to build special structures along the Millennium Line, including work at Front Street, which is now complete, as well as the Lougheed Town Centre Station section and Grandview Cut.

In addition, 11 of 12 station construction contracts have been issued. Station designs were developed on the basis of fixed-price conventional design contracts, followed by competitively tendered fixed-price construction contracts. The total value of these contracts is about $70 million. In addition, fixed-price contracts for system-wide elements such as the supply of escalators and elevators for stations have been awarded.

Labour contracts
RTP 2000 negotiated a labour agreement with the B.C. and Yukon Territory Construction Trades Council using the Highway Constructors Ltd. model. The agreement offers a number of benefits to the project, including competitive labour rates, a jurisdictional dispute resolution mechanism and a no strike/no lockout clause. Both union and non-union contractors may bid for work.

- **Communications and public consultation**

RTP 2000's strategic communications program is designed to heighten public awareness and stakeholder understanding of the Millennium Line. Activities include media relations and public information programs such as neighbourhood-specific newsletters and construction updates. A comprehensive website hosts current information on a variety of topics.

As part of a customer-driven approach to designing the new system, RTP 2000 carried out one of the most extensive consultation programs ever conducted in British Columbia. RTP 2000 continues to consult with the local governments, neighbourhoods and other key stakeholders as the project moves forward.

In addition, as project milestones are met, RTP 2000 informs the public of progress through information and events. For example, completion of the New Westminster tunnel was marked by a public walkthrough of the structure in October 2000. About 2,000 people took advantage of the chance to see the tunnel and learn more about its construction. In February 2001, an additional 3,000 people walked a portion of the elevated guideway in Burnaby.

The premier and the minister responsible for Transit joined RTP 2000 and Bombardier to unveil the first MK II cars that were built at Bombardier's Burnaby plant. The public and future Millennium Line customers participated in this event in late January 2001.

In addition, RTP 2000 has a number of general communications tools in place to provide up-to-date information including its website and quarterly newsletter.

- **Marketing**

  With a consumer-driven approach, RTP 2000's market research and marketing program has helped to provide information needed to support important decisions in planning and designing the Millennium Line. As the project moves forward, it is important that the public remains aware of the project with the key goal of attracting more riders to the SkyTrain system.

  The success of the Millennium Line will depend on how well it serves it customers. RTP 2000 has embarked on a marketing program that includes station models and interactive displays. This exhibit, which gives future customers the opportunity to view the new stations and learn more about station designs and safety features, has been at various venues across the Lower Mainland over the past year and has been explored by hundreds of thousands of residents.

- **Project controls and project management**

  RTP 2000 has recruited senior managers who bring experience from planning and construction of the existing SkyTrain project and other major transportation projects to manage the Millennium Line project.

  Primavera scheduling software is used to develop and update the project schedules. A detailed work breakdown structure describes the deliverables within each element of the approved project scope. The master schedule links all of the various projects and is the baseline for monitoring actual progress against the plan.

  The *Oracle Financials and Projects* software application provides the program's cost control system and handles costing and accounting functions including accounts receivable and payable and general ledger. The procurement module is used for the project's committed costs and purchasing. RTP 2000 pioneered a full integration of the *Primavera* system with Oracle to ensure consistency between schedule and cost activities.

  Among the many features of the *Oracle* system are functions that track, forecast and give advance warning on budgetary impacts or procedural infractions. *Oracle* produces monthly reports based on contracts awarded and by the project's Work Breakdown Structure (WBS) for cost reporting purposes. These reports include budgets, original contract values, approved changes, incurred costs, unpaid commitments, remaining values and forecast-at-completion costs.

- **Governance**

  RTP 2000's reporting and governance structure ensures full and regular review of costs by RTP 2000's board of directors and the provincial government.

  RTP 2000 submits comprehensive monthly progress reports to the board for its information and review. As well, other required reports, including independently generated quarterly summaries, are submitted to Treasury Board staff, Crown Corporations Secretariat, comptroller general and the auditor general on an ongoing basis.

RTP 2000's board must approve all changes to project scope. Changes to project scope of $2 million to $5 million must also be reported to the secretary of Treasury Board, while changes exceeding $5 million require full Treasury Board approval.

- **Quality controls and safety management**

RTP 2000 places a premium on quality management. Consultants, contractors and suppliers are required to submit quality assurance plans to cover their scopes of work. These plans encompass construction site activity, installation, inspection, testing and system documentation.

As the project owner, RTP 2000 has overall responsibility for safety. The prevention of accidents and protection of employees, the public and property is of utmost concern.

Procedures for ensuring safe practices are prescribed in RTP 2000's *Health and Safety Manual* and are adhered to throughout all project activities. This document conforms with current Workers' Compensation Board requirements and Highway Constructors Ltd. manuals.

- **Construction management**

RTP 2000's construction management team consists of area managers and owner's representatives. Each area team's responsibilities include overseeing design-build contracts and administering and inspecting all conventional construction contracts.

Regular construction status meetings are held to assess progress and take action to resolve outstanding issues. For example, the construction management team deals with such matters as schedule co-ordination, budget management, contracts, changes and claims, quality assurance, safety, and the mitigation of impacts on local communities.

- **Vehicle and systems management**

As noted above, RTP 2000 contracted with Bombardier to supply and install the vehicles and electrical and mechanical systems for the Millennium Line.

RTP 2000 will ensure Bombardier's vehicle production complies with its quality management program. Each completed vehicle will undergo testing to confirm that it meets specified design and performance standards. As well, project personnel will test the electrical and mechanical systems during the non-revenue testing and commissioning phase of the project before finalizing acceptance.

- **Environmental management**

RTP 2000 received all the environmental permits required for construction of the Millennium Line in fall 1999. Extensive environmental assessments were carried out to meet both provincial and federal requirements.

For most of its 21 km, the Millennium Line follows highly developed urban corridors and shares existing railway tracks and highway corridors. This has minimized the environmental impact of the new line.

Now that construction is underway, RTP 2000's environmental management program will ensure that the utmost care is taken to avoid, minimize or mitigate any environmental disturbances. If site specific environmental issues arise during construction, RTP 2000 ensures its contractors respond immediately to maintain environmental integrity.

PROJECT BUDGET

- **Millennium Line baseline construction budget**

The current budget as of Feb. 28, 2001 for the Millennium Line from New Westminster to Vancouver Community College is presented in Table 2 below.

Table 2
Millennium Line Budget
New Westminster to VCC
as of Feb. 28, 2001

Project 2000 Description	$ Million Budget
Electrical and mechanical systems (E&M)	250.8
Guideway	313.9
Property acquisition	48.3
Stations	93.5
System wide elements	9.3
Vehicles	110.5
Operations and maintenance facility (O&M)	7.4
Design management	24.7
Project management	93.6
Insurance	4.8
Interest during construction	89.3
GST and PST	27.8
Contingencies	92.8
Total New Westminster to VCC	**$1,166.6**

- **Total RTP 2000 expenditure authorization**

As of Feb. 28, 2001 RTP 2000 had received Treasury Board expenditure authorization totalling $1,402.6 million. The breakdown of this authorization is presented in Table 3 below.

Table 3
Total RTP 2000 Expenditure Authorization
As of Feb. 28, 2001

Project	Project description	$ million budget
2000	VCC to New Westminster construction (Millennium Line)	1,166.6
2100	Lougheed Mall to Coquitlam Line study	3.8
2200	VCC to Arbutus Line study	4.2
2300	Support to cost-sharing negotiations	1.7
2600	Systems upgrades	94.0
2800	Municipal Integration Fund	35.0
2900	Coquitlam line pre-build *	29.3
	Total Approved Projects	**$1,334.6**
Other	TransLink MK II vehicles**	68.0
	Total projects and vehicles	**$1,402.6**

** This $29.3 million represents an advance against the $730 million budget estimate established for the Port Moody-Coquitlam Line.*
*** This $68 million will be recovered from TransLink when the cars are delivered.*

As shown in Table 3, the total authorization includes the $1.167-billion budgeted for Millennium Line construction and $8 million for the two extension feasibility studies. It also provides $1.7 million for technical support to cost-sharing negotiations with TransLink, the agency ultimately responsible for operating the Millennium Line.[1]

A systems upgrade budget of $94 million (Project 2600) provides for expanded control centre and vehicle storage capacity and for several needed improvements to the Expo Line guideway. The work will ensure that MK I and MK II vehicles will operate seamlessly on both the Expo and Millennium lines. TransLink will reimburse the Province the total $94 million.

In addition, the cost-sharing agreement between the Province and TransLink established a $60-million municipal integration fund, to be cost shared equally by both agencies. Of the $60 million, $35 million has been earmarked for the Millennium Line. TransLink will reimburse its portion of the $35 million.

Funding for the Port Moody-Coquitlam pre-build was approved primarily for modified trackwork and substructures at the Lougheed Town Centre Station junction to accommodate the future Port Moody-Coquitlam line.

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[1] *TransLink is negotiating with Bombardier to manage and operate the region-wide SkyTrain system.*

- **Millennium Line and other approved projects, estimated cost to completion**

  Table 4 outlines the expenditure forecast by year for all approved projects. It should be noted that:

  - In addition to the Millennium Line vehicles acquired within Project 2000, TransLink ordered 20 MK II vehicles to expand the capacity of the existing Expo Line. As part of the cost-sharing agreement between the Province and TransLink, RTP 2000 is financing the cost of these vehicles within approved provincial funding and will recover $68 million from TransLink when the cars are delivered.

  - Treasury Board also approved $35 million in expenditures for municipal integration fund items along the Millennium Line over fiscal years 2000/01 to 2003/04. Of the $35 million, $17.5 million will be recovered from TransLink. An additional $25 million of cost-sharable expenditures will be defined and approved for municipal integration fund items along the future Port Moody-Coquitlam Line.

Table 4
Projected Expenditure by Year - Millennium Line and Other Approved Projects
($ million)

Project	Project Description	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	Total
2000	E & M systems		184.1	4.3	34.8	20.8		244.0
	Guideway		91.0	204.1	33.4	.99		329.4
	Property acquisition	0.9	22.1	5.5	9.0	6.4		43.9
	Stations			20.4	63.7	5.4		89.6
	System wide elements			1.5	14.5	2.2		18.2
	Access agreements			1.4	3.4			4.8
	Vehicles	103.7	0.97		6.6			110.4
	O & M facility		4.4	0.7	4.9			10.0
	Design management	7.8	7.7	6.2	3.9	0.8	0.04	26.6
	Project management	10.8	22.6	24.0	24.4	10.1	0.4	92.4
	Insurance	1.5	1.2	1.1	1.0			4.8
	Interest during construction	2.4	18.6	40.4	45.9	7.3		114.6
	GST and PST	3.8	6.0	9.0	7.3	1.6	0.002	27.7
	Contingencies			12.5	30.0	7.6		50.1
	Subtotal	**130.8**	**358.0**	**331.2**	**282.9**	**63.2**	**0.5**	**1,166.6**
2100	Lougheed/ Coquitlam Line Study	0.7	0.7	1.6	0.8			3.8
2200	VCC/ Arbutus Line Study	0.3	0.8	0.4	2.6			4.2
2300	Operations and Maintenance negotiations	0.7	0.4	0.5	0.2			1.7
2600*	Systems upgrades		42.3	26.6	25.2			94.0
	20 MK II Vehicles	56.5	2.9	3.3	5.4			68.0
	Municipal Integration Fund			8.0	24.0	3.0		35.0
2900	PMC pre-build		1.2	17.8	10.2			29.3
	Total	**$189.0**	**$406.4**	**$389.3**	**$351.3**	**$66.2**	**$0.5**	**$1,403.2**

** Expenditures for systems upgrades & 20 MK II vehicles will be fully reimbursed by TransLink*
Expenditures for municipal integration fund will be funded 50 per cent by TransLink

EXPECTED RESULTS: MEASURING SUCCESS

RTP 2000's board of directors has implemented strong measures to regularly track progress and control the project to meet its goal of completing the Millennium Line project and extension studies on budget.

Taken together, the project's governance, planning, consultation, reporting, contracting and project management strategies ensure that the project is fully accountable to the provincial government, project stakeholders and the public.

- **Status and progress reporting**

  At the end of each month, RTP 2000 staff produces a project progress report that includes the status of all projects under its control, including the Millennium Line, Port Moody-Coquitlam Line and Vancouver extension projects, negotiations, Coquitlam pre-build, municipal integration fund and systems upgrades. The report includes activities completed to date, progress versus budget, expenditure versus budget, commitments to date, schedule, contract and agreement status and forecasts to completion.

  RTP 2000 submits monthly project progress reports and quarterly financial and project reviews to its board and the Ministry of Finance and Corporate Relations.

- **Independent third-party reviews**

  The project has instituted a system of controls to ensure it meets its goal of completing the project on budget. Risks facing the project change as the project moves through each stage of design, construction and testing and commissioning. To make sure the controls continue to be effective throughout the entire project, independent, professional firms regularly review project progress and mark that progress against the schedule and budget.

  As mentioned earlier, KPMG conducts quarterly financial reviews. The reports are distributed to key stakeholders and posted on RTP 2000's website. The financial reviews help to ensure project spending is appropriate and to ensure the project remains on budget.

  In addition, Gannett Fleming conducts quarterly project reviews. These reviews analyze project budget and schedule status in detail and examine all facets of the project. The oversight function provides a means of identifying and preventing problems based on the analysis of trends and the oversight team's broad experience with other, similar projects. Following each review, Gannett Fleming and project staff formulate a course of action to deal with each identified issues.

  The review, together with management's response, is presented to the board of directors and shared with Ministry of Finance and Corporate Relations. The reviews are then posted on RTP 2000's website. To date, Gannett Fleming has conducted five such reviews.

In addition, RTP 2000 also enlists independent reviews of various contracts, for example reviews of Bombardier's vehicle and electrical and mechanical contracts. A comprehensive value engineering process at the beginning of the project helped to ensure the project uses the most cost-effective design and construction methods. RTP 2000 continues to apply value engineering in awarding contracts.

- **Achieving goals and performance targets**

After construction is complete, the project will enter the system testing and commissioning phase to ensure all automated functions are performing properly. Testing and commissioning has begun on the first phase of the Millennium Line, through New Westminster. The test period is expected to last 7.5 months, and is scheduled to be completed for opening to Braid Station in December 2001. RTP 2000 and its board of directors will authorize final acceptance once commissioning is finished.

Meanwhile, RTP 2000 is working with TransLink to integrate the Millennium Line with TransLink's other public transit services, including the existing Expo Line. TransLink continues to negotiate an operations and maintenance agreement with Bombardier. The agreement would see Bombardier responsible for operations and maintenance of both the Millennium and Expo lines.

The key goal of RTP 2000 is to build the Millennium Line and plan for future SkyTrain extensions within the approved budgets. With Greater Vancouver's population expected to grow dramatically over the next decade, planning for an improved transit system is underway now. The Millennium Line marks the beginning of rapid transit expansion that will help achieve the goals of a better, cleaner future with affordable transit options.

Ultimately, the number of riders attracted by the Millennium Line's fast, comfortable, safe and convenient service — and the broader support of the community served by the new line — will be the lasting yardstick by which RTP 2000's success in achieving these goals will be measured.

ADDITIONAL INFORMATION

RTP 2000's website includes information on the route alignment, planning studies, agreements, public consultation activities and the latest news on the project's progress and status. Copies of fact sheets, reports and information summaries are available at:

www.rapidtransit.bc.ca